MD_PERELIGYN_ · GUIDE

BECLOMETASONE + FORMOTEROL (FOSTER 100/6): ONE INHALER FOR ASTHMA AND COPD

Foster 100/6 combines in one inhaler the steroid beclometasone, which calms inflammation in the airways, and formoterol, which opens them quickly. In asthma it lowered the risk of severe attacks by **36 %**, in severe COPD the rate of flare-ups by **28 %**. In plain words: how it works, what the trials showed, how it is used and who should see a doctor first.

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01 · KEY POINTS

Fewer severe asthma attacks. When the same inhaler was used to relieve symptoms, the risk of a severe attack was **36 %** lower than with salbutamol: 99 vs 152 people had at least one severe attack, 1701 adults, 48 weeks (Papi A Lancet Respir Med 2013. PMID 24321801).

Fewer COPD flare-ups. In severe COPD the flare-up rate was **28 %** lower than on formoterol alone, 1186 people, 48 weeks (Wedzicha JA Respir Med 2014. PMID 24953015).

Stronger at a lower dose. The beclometasone particles are extrafine, so **100 mcg** in Foster equal **250 mcg** of standard beclometasone (Fostair SmPC, section 4.2).

Fast and long-lasting. Formoterol opens the airways within 1–3 minutes, and the effect lasts 12 hours (Fostair SmPC, section 5.1).

BECLOMETASONE, EXTRAFINE PARTICLES

HOW MUCH

100 mcg per puff

HOW IT HELPS

calms inflammation in the airways; **100 mcg** equal **250 mcg** of standard beclometasone

WHAT STUDIES SHOWED

added to formoterol in severe COPD: **28 %** fewer flare-ups (1186 people)

FORMOTEROL

HOW MUCH

6 mcg per puff

HOW IT HELPS

opens the airways within 1–3 minutes for 12 hours

WHAT STUDIES SHOWED

a Foster puff as reliever instead of salbutamol: risk of a severe asthma attack **36 %** lower (1701 people)

FOSTER 100/6 IN ASTHMA, MAINTENANCE AND RELIEVER

HOW MUCH

1 puff twice a day plus 1 puff for symptoms, up to 8 puffs a day

HOW IT HELPS

one inhaler instead of two

WHAT STUDIES SHOWED

1701 people: severe attack in 99 vs 152, first attack 75 days later

FOSTER 100/6 IN SEVERE COPD

HOW MUCH

2 puffs twice a day

HOW IT HELPS

fewer flare-ups, easier breathing

WHAT STUDIES SHOWED

1186 people: **28 %** fewer flare-ups, better quality of life on the SGRQ questionnaire

02 · HOW IT WORKS

In asthma and COPD the airways are inflamed, and the muscle around them tightens. Foster acts on both with one puff.

Beclometasone is an inhaled steroid. It calms inflammation right in the airways, and far less of it reaches the rest of the body than from tablets. Formoterol relaxes the airway muscle: the effect starts 1–3 minutes after the puff and lasts 12 hours (Fostair SmPC, section 5.1).

The beclometasone particles in Foster are extrafine. So it acts more strongly than the standard form: **`100 mcg`** in Foster equal **`250 mcg`** of beclometasone in a standard inhaler, and the daily steroid dose is lower (Fostair SmPC, section 4.2).

03 · WHAT STUDIES SHOWED

PAPI 2013, ASTHMA, 48 WEEKS (PMID 24321801)

WHO TOOK PART

1701 adults with not fully controlled asthma (852 and 849)

COMPARISON

Foster as reliever vs salbutamol, everyone on Foster 1 puff twice a day

RESULT

severe attack in 99 vs 152 people, risk **36 %** lower (HR 0.64); first attack after 209 vs 134 days

FORWARD, WEDZICHA 2014, COPD, 48 WEEKS (PMID 24953015)

WHO TOOK PART

1186 people with severe COPD and past flare-ups

COMPARISON

Foster 2 puffs twice a day vs formoterol **12 mcg** twice a day

RESULT

28 % fewer flare-ups (rate ratio 0.72); volume breathed out in 1 second +**69 ml**; better quality of life

04 · ASTHMA: ONE INHALER FOR MAINTENANCE AND FOR ATTACKS

In a double-blind study all 1701 adults with asthma took 1 puff of Foster morning and evening. One group relieved symptoms with an extra puff of Foster (852 people), the other with salbutamol (849). Follow-up was 48 weeks (Papi A Lancet Respir Med 2013. PMID 24321801).

- At least one severe attack (hospital, emergency visit or a course of steroid tablets for 3 days or more): 99 vs 152 people, risk **36 %** lower (HR 0.64).
- The first severe attack came on average after 209 days vs 134, 75 days later.
- There were fewer days with mild attacks: 56 vs 65 per person per year.

Symptoms and lung function improved equally in both groups. Serious adverse events occurred in 4 and **5 %** of participants.

05 · COPD: THE FORWARD STUDY

1186 people with severe COPD (on average **42 %** of the normal volume breathed out in the first second, mean age 64) and past flare-ups received Foster 2 puffs twice a day or formoterol without a steroid. Follow-up was 48 weeks (Wedzicha JA Respir Med 2014. PMID 24953015).

- **28 %** fewer flare-ups (rate ratio 0.72).
- The volume breathed out in the first second was **69 ml** higher at 12 weeks.
- The first flare-up came later, and quality of life on the SGRQ questionnaire was better.

Pneumonia was rare but more common on Foster: **3.8 %** vs **1.8 %**.

06 · INDICATIONS

According to the Fostair SmPC (section 4.1) it is used in adults from 18 years:

- **asthma**, when a combination of an inhaled steroid and a long-acting bronchodilator is needed: if a steroid alone with an as-needed inhaler is not enough, or if asthma is already well controlled on a steroid and such a bronchodilator;
- **severe COPD** (volume breathed out in the first second below **50 %** of normal) with repeated flare-ups, when symptoms persist despite regular long-acting bronchodilators.

07 · HOW IT IS USED

- **Asthma, maintenance therapy:** 1–2 puffs twice a day, no more than 4 puffs a day. A separate fast-acting inhaler is kept at hand for attacks.
- **Asthma, maintenance and reliever (MART):** 1 puff in the morning and 1 in the evening, 1 more puff for symptoms; if symptoms persist after a few minutes, 1 more. No more than 8 puffs a day. If extra puffs are needed every day, the doctor reviews the treatment.
- **COPD:** 2 puffs twice a day.
- A new inhaler, or one not used for 14 days or more, is first tested with one puff into the air.
- Breathe in slowly and deeply, press at the start of the breath, then hold the breath. If it is hard to time the breath and the press, an AeroChamber Plus spacer helps.
- After inhaling, rinse the mouth with water, gargle or brush the teeth.
- Use it every day, even without symptoms, and do not stop it abruptly (Fostair SmPC, sections 4.2 and 4.4).

08 · SAFETY

- Common: oral thrush, sore throat, headache; in COPD, pneumonia. Sometimes trembling hands, dizziness (Fostair SmPC, section 4.8).
- If breathing gets worse with wheezing right after a puff, this is paradoxical bronchospasm: relieve it with a fast-acting inhaler, stop Foster and see a doctor at once.
- If the fast-acting inhaler is needed more and more often or asthma suddenly worsens, see a doctor urgently (Fostair SmPC, section 4.4).

09 · IMPORTANT

Foster is a prescription medicine; the dose and regimen are chosen by a doctor. It is not meant as the first treatment for asthma, and it is not started during a flare-up. Talk to a doctor first if you have:

— COPD and pneumonia in the past;

— heart rhythm problems or heart disease;

— thyrotoxicosis;

— diabetes: formoterol can raise blood sugar;

— glaucoma or cataract;

— lung tuberculosis, now or in the past;

— surgery under inhaled anaesthesia coming up: Foster is not used for 12 hours before it.

10 · SUMMARY

Foster 100/6 delivers in one puff a steroid against inflammation and a fast, long-acting bronchodilator, and the extrafine particles allow a lower steroid dose. In asthma, one inhaler for maintenance and attacks lowered the risk of a severe attack by **36 %** in 1701 adults; in severe COPD there were **28 %** fewer flare-ups in 1186 people. Good inhaler technique, rinsing the mouth and a decision made with a doctor.

11 · SOURCES

Studies cited in the text, by PubMed ID

Papi A Lancet Respir Med 2013 · PMID 24321801

Wedzicha JA Respir Med 2014 · PMID 24953015

Article and plain-language version:

universum.earth/en/blog/beclometasone-formoterol-foster-asthma-copd

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23.11.2026

Educational material, not a substitute for a doctor's consultation